

WHAT IS CLAIMED IS:

1. A method for providing environmental information to users, comprising the steps of:
  - 5 measuring environmental information automatically by each of a plurality of environment sensors arranged at a plurality of regions;  
collecting the environmental information measured by each environment sensor automatically to a base device;
  - 10 storing the environmental information collected from the plurality of environment sensors at the base device;  
processing the environmental information at the base device according to a user information of an individual user; and
  - 15 providing processed environmental information from the base device to the individual user through a network connecting the users and the base device.
2. The method of claim 1, wherein at the procesing step  
20 and the providing step, an information protection is applied with respect to the user information and the processed environmental information to be provided to the individual user.
- 25 3. The method of claim 1, wherein at the collecting step, the environmental information is collected through a radio communication system and/or a wired communication system connecting the environmental sensors and the base device.
- 30 4. The method of claim 1, wherein at the collecting step, each environment sensor transmits the environmental information either automatically or in response to a request from the base device.
- 35 5. The method of claim 1, further comprising the step of:

commanding a measurement condition setting update from the base device to at least one environment sensor when the environmental information measured by the at least one environment sensor meets a prescribed condition for judging a need for sensor measurement condition change.

6. The method of claim 1, wherein at the providing step, the base device provides the environmental information for a current location of the individual user which is registered by the individual user in advance or automatically detected according to a communication with the individual user, or the environmental information for a location close to the current location, in response to an information acquisition request made by the individual user through the network.

7. The method of claim 1, wherein at the measuring step, each environment sensor measures an amount of pollens scattering at a region in which each environment sensor is arranged, such that the base device collects pollen amount information from each environment sensor at the collecting step, processes the pollen amount information to obtain pollen information at the processing step, and provides the pollen information at the providing step.

8. The method of claim 7, wherein at the processing step, the base device applies statistical information processing including integrating processing and averaging processing with respect to the pollen amount information collected from the environment sensors, such that the base device stores the pollen amount information and processed pollen amount information at the storing step.

9. The method of claim 7, wherein at the storing step, the base device stores the pollen amount information along

with date and time information indicating date and time at which the pollen amount information is obtained, and

the base device processes the pollen amount information for each region as a function of the date and time  
5 information at the providing step.

10. The method of claim 7, wherein at the processing step, the base device judges whether each region is in a state with little pollens or a state with many pollens, according  
10 to the pollen amount information, and

the base device provides the pollen information indicating a state of each region as the state with little pollens or the state with many pollens at the providing step.

15 11. The method of claim 10, wherein at the processing step, the base device produces a pollen distribution area information indicating regions in the state with little pollens and regions in the state with many pollens in a  
20 form of a map, and/or a pollen border information indicating a border between the regions in the state with little pollens and regions in the state with many pollens on the map, and

the base device provides the pollen information  
25 including the pollen distribution area information and/or the pollen border information at the providing step.

12. The method of claim 10, wherein the processing step includes the steps of:  
30 storing the pollen information indicating the state of each region in a pollen information database;  
storing the user information of each user including a user ID and a user specified region which are registered by each user, in a personal information database; and  
35 updating the pollen information database when the

state of one region has changed as a result of repeating the judging step by using newly obtained pollen amount information, while searching through the personal information database to acquire user IDs of relevant users who registered said one region as the user specified region; and

the base device provides the pollen information for notifying a change of the state of said one region to the relevant users according to the user IDs acquired from the personal information database at the providing step.

13. The method of claim 7, wherein the processing step includes the steps of:

judging a pollen amount level of each region according to the pollen amount information for each region as one of a plurality of pollen amount levels, and storing the pollen amount level of each region in a pollen information database;

storing the user information of each user including a user ID, a user specified region, and a correspondence table indicating a correspondence between the plurality of pollen amount levels and a plurality of pollen allergy symptoms of each user which are registered by each user, in a personal information database;

searching through the pollen information database to acquire the pollen amount level of the user specified region of each user, while searching through the personal information database to acquire the correspondence table of each user; and

obtaining one pollen allergy symptom of each user that corresponds to the pollen amount level of the user specified region of each user acquired from the pollen information database according to the correspondence table of each user acquired from the personal information database; and

the base device provides the pollen information including a pollen warning information that indicates said one pollen allergy symptom to each user at the providing step.

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14. An environmental information providing system, comprising:

- a plurality of environment sensors arranged at a plurality of regions and configured to measure environmental information automatically;
- a first communication unit configured to collect the environmental information measured by each environment sensor automatically;
- a database configured to store the environmental information collected from the plurality of environment sensors by the first communication unit;
- a processing unit configured to process the environmental information stored in the database according to a user information of an individual user; and
- a second communication unit configured to provide processed environmental information obtained by the processing unit to the individual user through a network connecting the users and the environmental information providing system.

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15. The environmental information providing system of claim 14, wherein the processing unit and the second communication unit apply an information protection with respect to the user information and the processed environmental information to be provided to the individual user.

16. The environmental information providing system of claim 14, wherein the first communication unit collects the environmental information through a radio communication

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system and/or a wired communication system connecting the environmental sensors and the environmental information providing system.

5 17. The environmental information providing system of claim 14, wherein each environment sensor transmits the environmental information either automatically or in response to a request from the environmental information providing system.

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18. The environmental information providing system of claim 14, wherein the first communication unit also commands a measurement condition setting update to at least one environment sensor when the environmental information  
15 measured by the at least one environment sensor meets a prescribed condition for judging a need for sensor measurement condition change.

19. The environmental information providing system of  
20 claim 14, wherein the second communication unit provides the environmental information for a current location of the individual user which is registered by the individual user in advance or automatically detected according to a communication with the individual user, or the  
25 environmental information for a location close to the current location, in response to an information acquisition request made by the individual user through the network.

20. The environmental information providing system of  
30 claim 14, wherein each environment sensor measures an amount of pollens scattering at a region in which each environment sensor is arranged, the first communication unit collects pollen amount information from each environment sensor, the processing unit processes the  
35 pollen amount information to obtain pollen information, and

the second communication unit provides the pollen information.

21. The environmental information providing system of claim 20, wherein the processing unit applies statistical information processing including integrating processing and averaging processing with respect to the pollen amount information collected from the environment sensors, and

the database stores the pollen amount information and processed pollen amount information.

22. The environmental information providing system of claim 20, wherein the database stores the pollen amount information along with date and time information indicating date and time at which the pollen amount information is obtained, and

the processing unit processes the pollen amount information for each region as a function of the date and time information.

23. The environmental information providing system of claim 20, wherein the processing unit judges whether each region is in a state with little pollens or a state with many pollens, according to the pollen amount information, and

the second communication unit provides the pollen information indicating a state of each region as the state with little pollens or the state with many pollens.

24. The environmental information providing system of claim 23, wherein the processing unit produces a pollen distribution area information indicating regions in the state with little pollens and regions in the state with many pollens in a form of a map, and/or a pollen border information indicating a border between the regions in the

state with little pollens and regions in the state with many pollens on the map, and

the second communication unit provides the pollen information including the pollen distribution area

5 information and/or the pollen border information.

25. The environmental information providing system of claim 23, wherein the processing unit stores the pollen information indicating the state of each region in a pollen information database; stores the user information of each user including a user ID and a user specified region which are registered by each user, in a personal information database; and updates the pollen information database when the state of one region has changed as a result of

10 repeating the judging step by using newly obtained pollen amount information, while searching through the personal information database to acquire user IDs of relevant users who registered said one region as the user specified region; and

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20 the second communication unit provides the pollen information for notifying a change of the state of said one region to the relevant users according to the user IDs acquired from the personal information database.

25 26. The environmental information providing system of claim 20, wherein the processing unit judges a pollen amount level of each region according to the pollen amount information for each region as one of a plurality of pollen amount levels, and storing the pollen amount level of each

30 region in a pollen information database; stores the user information of each user including a user ID, a user specified region, and a correspondence table indicating a correspondence between the plurality of pollen amount levels and a plurality of pollen allergy symptoms of each

35 user which are registered by each user, in a personal



information database; searches through the pollen  
information database to acquire the pollen amount level of  
the user specified region of each user, while searching  
through the personal information database to acquire the  
5 correspondence table of each user; and obtains one pollen  
allergy symptom of each user that corresponds to the pollen  
amount level of the user specified region of each user  
acquired from the pollen information database according to  
the correspondence table of each user acquired from the  
10 personal information database; and

the second communication unit provides the pollen  
information including a pollen warning information that  
indicates said one pollen allergy symptom to each user.

15 27. A method for providing an environmental information  
service from a service system to users, comprising the  
steps of:

offering processed environmental information obtained  
by processing environmental information collected from a  
20 plurality of environment sensors arranged at a plurality of  
regions, according to a user information of an individual  
user, for accesses from the users through a network  
connecting the users and the service system; and

providing the processed environmental information from  
25 the service system to the individual user through the  
network.

28. The method of claim 27, wherein at the providing step,  
the service system provides the environmental information  
30 in response to an access made by the individual user  
through the network.

29. The method of claim 27, wherein at the providing step,  
the service system provides the environmental information  
35 for a current location of the individual user which is

registered by the individual user in advance or  
automatically detected according to a communication with  
the individual user, or the environmental information for a  
location close to the current location, in response to an  
5 information acquisition request made by the individual user  
through the network.

30. The method of claim 27, wherein each environment  
sensor measures an amount of pollens scattering at a region  
10 in which each environment sensor is arranged, such that the  
service system collects pollen amount information from each  
environment sensor and processes the pollen amount  
information to obtain pollen information at the offering  
step, and provides the pollen information at the providing  
15 step.

31. The method of claim 30, wherein at the offering step,  
the service system judges whether each region is in a state  
with little pollens or a state with many pollens, according  
20 to the pollen amount information, and

the service system provides the pollen information  
indicating a state of each region as the state with little  
pollens or the state with many pollens at the providing  
step.

32. The method of claim 31, wherein at the offering step,  
the service system produces a pollen distribution area  
information indicating regions in the state with little  
pollens and regions in the state with many pollens in a  
30 form of a map, and/or a pollen border information  
indicating a border between the regions in the state with  
little pollens and regions in the state with many pollens  
on the map, and

the service system provides the pollen information  
35 including the pollen distribution area information and/or

the pollen border information at the providing step.

33. The method of claim 31, wherein the offering step includes the steps of:

- 5 storing the pollen information indicating the state of each region in a pollen information database;
- storing the user information of each user including a user ID and a user specified region which are registered by each user, in a personal information database; and
- 10 updating the pollen information database when the state of one region has changed as a result of repeating the judging step by using newly obtained pollen amount information, while searching through the personal information database to acquire user IDs of relevant users
- 15 who registered said one region as the user specified region; and
- the service system provides the pollen information for notifying a change of the state of said one region to the relevant users according to the user IDs acquired from the
- 20 personal information database at the providing step.

34. The method of claim 30, wherein the offering step includes the steps of:

- judging a pollen amount level of each region according
- 25 to the pollen amount information for each region as one of a plurality of pollen amount levels, and storing the pollen amount level of each region in a pollen information database;
- storing the user information of each user including a
- 30 user ID, a user specified region, and a correspondence table indicating a correspondence between the plurality of pollen amount levels and a plurality of pollen allergy symptoms of each user which are registered by each user, in a personal information database;
- 35 searching through the pollen information database to

acquire the pollen amount level of the user specified region of each user, while searching through the personal information database to acquire the correspondence table of each user; and

- 5 obtaining one pollen allergy symptom of each user that corresponds to the pollen amount level of the user specified region of each user acquired from the pollen information database according to the correspondence table of each user acquired from the personal information  
10 database; and

the service system provides the pollen information including a pollen warning information that indicates said one pollen allergy symptom to each user at the providing step.

- 15 35. The method of claim 30, wherein at the providing step, the service system provides the environmental information along with additional information related to pollen allergy.

- 20 36. The method of claim 27, further comprising the step of;

- charging an information fee for the processed environmental information provided by the service system,  
25 to the individual user.

37. The method of claim 27, wherein at the providing step, the service system provides the environmental information along with advertisement information of a sponsor, and the  
30 method further comprises the step of:

charging an advertisement fee for the advertisement information to the sponsor.

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